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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,216	05/31/2001	Robert D. Ainsworth	3764.P003	2384

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EXAMINER

MANTIS MERCADER, ELENI M

ART UNIT PAPER NUMBER

3737

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

E

Office Action Summary

Application No.

09/872,216

Applicant(s)

AINSWORTH ET AL.

Examiner

Eleni Mantis Mercader

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 9/9/2005 have been fully considered but they are not persuasive. The Examiner used the reference of Engelson'492 to provide evidence that the use of tapered section with a distal plunge-ground length is old in the art. The section of the reference cited by the Examiner is col. 1, lines 41-49, which is a section under "Background of the Invention" clearly, indicating what is known as old in the art. That particular section teaches as old that the tapered guidewire increases flexibility, regardless of any drawbacks, and that is the motivation to combine the teachings. The same section references Morrison (US Patent number 4,619,274), which clearly teaches again what is old in the art, meaning tapered and distal plunge-ground length (see Figures 2-5). Therefore the rejection is maintained and made Final. The Terminal Disclaimer overcomes the Double Patenting rejection and the objections have been overcome by the claim amendments.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8, 9, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tenerz et al. of record in view of Engelson (US Patent 5599492).

3. In regards to claims 1-3, figure 1 of Tenerz et al. discloses a therapeutic

guidewire having an optical fiber (3) extending along the length of the guidewire for measuring intravascular pressure, column 2. Tenerz et al. furthermore teaches a high strength proximal core section by teaching use of tightly wound wire at the proximal section and flexible distal core by teaching use of flexible, resilient wire at the distal section (see col. 2, lines 25-33).

In regards to claim 4, the teaching to intravascular pressure measurement of Tenerz et al. is an example of hemodynamic blood characteristics.

In regards to claim 5 the references clearly recites that the guidewire is for guiding a catheter, see Abstract. Therefore although the catheter structure is not positively recited in the reference, it is inherent that the guidewire is operatively coupled to a catheter. The sole purpose of having a guidewire is to guide a probe (i.e. catheter) coupled to it. The operative coupling of a catheter to a guidewire is inherent. In regards to claim 18 the patent teaches that the components of the guidewire can contain a compound making it visible under radiography or having a radiopaque substance as claimed by applicant, column 3 lines 23-27.

Tenerz et al. furthermore teaches a high strength proximal core section by teaching use of tightly wound wire at the proximal section and flexible distal core by teaching use of flexible, resilient wire at the distal section (see col. 2, lines 25-33).

Tenerz et al. do not explicitly teach a tapered section and a distal plunge-ground length.

In the same field of endeavor, Engelson teaches a tapered section and a distal plunge-ground length because this increases the flexibility of the guidewire where the sharpest wire turns are encountered (see col. 1, lines 41-49).

It would have been obvious to one skilled in the art at the time that the invention was made to have modified Tenerz et al. to incorporate the teaching of Engelson in order to allow to increase the flexibility of the guidewire as taught by Engelson.

In regards to claims 6-8, 9, and 22-25 Tenerz et al. teaches an intravascular guidewire having an optical fiber extending thereon for proving blood pressure measurements (example of a hemodynamic characteristic) and further features as stated above.

Tenerz et al. does not expressly teach said optical fiber movable within guidewire and being exposed within vasculature of patient. It would have been obvious to a person of ordinary skill in the art to have a movable optical fiber or a fiber being exposed to the vasculature of the patient because either configuration satisfies the measurement of blood pressure in any desire vascular location as taught Tenerz et al. thereby constituting functional equivalents.

The Tenerz et al. reference does not expressly recite the data processing system and the steps of operating a data processor and processing the diagnostic data. It would have been obvious to a person of ordinary skill in the art to provide said system and method steps of data processing because such is essential to able to read/interpret the diagnostic data received. Any diagnostic and/or therapeutic data received must be feed into appropriate processing means and method for analysis.

4. Claims 11-17, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tenerz et al in view of Engelson and further in view of Jafari and Hurtak et al of record.

In regards to claims 11-17 and 19-21 Tenerz et al. teaches an intravascular guidewire having an optical fiber extending thereon for proving blood pressure measurements (example of a hemodynamic characteristic).

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In regards to the claims 11 , 15, and 16 Tenerz et al. reference does not expressly teach said optical fiber movable within guidewire and being exposed within vasculature of patient.

It would have been obvious to a person of ordinary skill in the art to have a movable optical fiber or a fiber being exposed to the vasculature of the patient because either configuration satisfies the measurement of blood pressure in any desire vascular location as taught Tenerz et al.

In regards to claims 11-14 and 19-21 Tenerz et al. does not teach specific structure components of guidewire comprising distal core section, proximal core section, connecting member, atraumatic distal tip, flexible coil disposed about distal core section, shaped ribbon coupled to distal core section, atraumatic tip including a metal or polymeric material, and a clear polymeric jacket disposed about distal core section, said clear polymeric jacket coupled to at least one point along an outer surface of the distal core section, the atraumatic distal tip coupled to a distal end of clear polymeric jacket.

Figure 1 of Jafari discloses a therapeutic guidewire (10) comprising an elongated body having a distal core section (12) coupled to a proximal core section (11) by a connecting member (13) and an atraumatic distal tip (24) formed at a distal end (21) of the distal core section (12). The device further comprises a flexible coil (22) disposed about the distal core section (12) and coupled to at least one point (25) along the distal core section (12). A shaped ribbon (23) is shown within the therapeutic guidewire (10), columns 5-6. The

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atraumatic distal tip (24) is coupled to the distal end of the flexible coil (22). The atraumatic tip is formed with a solder (includes combination of gold and tin which satisfies applicant's limitation to metal or hardenable polymeric material, column 5, lines 56-61).

The Jafari reference provides evidence that said improved guidewire structure enables advanced access throughout and is easily maneuverable within the vastly branched vascular, column 8 lines 1-29.

It would have been obvious to a person of ordinary skill in the art to incorporate the guidewire structure limitations of Jafari into the system of Tenerz et al. because the structure of Jafari improves on the movement of a guidewire within the vascular of the body.

Tenerz et al. in view of Jafari do not expressly teach a polymeric jacket disposed about the distal core. In the same field of endeavor, Hurtak et al. teach a plastic tip as an alternative to glass or metal as this is a well know functional equivalent material for jackets used with guidewires (see col. 3, lines 60-64).

Therefore, it would have been obvious to one skilled in the art at the time that the invention was made to have modified Tenerz et al. in view of Jafari and incorporated the teaching of Hurtak et al. as an alternative material used in jackets with guidewires.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

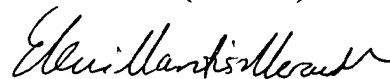
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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eleni Mantis Mercader whose telephone number is (571) 272-4740. The examiner can normally be reached on Mon. - Fri., 8:00 a.m.-6:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571) 272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Eleni Mantis Mercader
Primary Examiner
Art Unit 3737

EMM